

NEW SPECIES OF DOLICHOPODIDAE
FROM CALIFORNIA AND UTAH (DIPTERA).

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This report includes descriptions of five apparently undescribed species of Dolichopodidae from California and one species from Utah.

CHRYBOTUS SILVICOLUS Harmston, n. sp.

MALE. Length, 2 mm. Face greenish, lightly dusted with gray pollen, its lower portion extremely narrow, barely separating the eyes. Front green, metallic. Palpi white, very prominent, as long as second joint of middle tarsi, each with a conspicuous black hair near the tip on anterior surface. Lower orbital cilia white, about eight of the upper cilia on each side black. Antennae black; third joint small, about as long as wide, rounded at tip. Arista apical.

Thorax and abdomen green, metallic, lightly dusted with brownish-gray pollen. Bristles of thorax and abdomen black. Legs wholly black. Fore coxae with black hairs and bristles on anterior surface. All femora with a row of delicate, black, hair-like bristles on lower, inner edge. Posterior tibiae not enlarged, with several prominent bristles on posterior surface, but without conspicuous hairs. Halteres yellow. Calypters yellow, with black cilia.

Wings gray, hyaline; fourth vein noticeably convergent toward third vein beyond the cross-vein, its last portion parallel with third vein and ending well in front of the apex of wing; cross-vein situated at basal third of wing, one-third the length of apical segment of fifth vein.

FEMALE. Similar to the male in coloration of the body and legs. Face as wide as the distance between the tips of third and fourth longitudinal veins. Palpi black, much larger than those of the male.

Described from 27 males and 17 females from California, collected by Mr. P. H. Arnaud, Jr., during the period June 29 to August 18, 1948. Six males and 16 females, which include holotype male and allotype female, were taken at Pinecrest, Tuolumne County; 21 males and one female were taken at Belle Meadows, Tuolumne County. Holotype male and allotype female to be deposited in the

insect collection of the California Academy of Sciences; paratypes to be deposited in the U. S. National Museum, University of California and in the collection of Mr. Arnaud and the writer.

Differentia: *Chrysotus silvicolus* n. sp. resembles *C. californicus* Van Duzee, but differs in possessing large white palpi and in having the cilia of calypters black. In *californicus* the palpi are small, black and the cilia of calypters are pale.

MEDETERUS ARNAUDI Harmston, n. sp.

MALE: Length, 3 mm.; length of wing, 3.5 mm. Face and front thickly covered with silvery-gray pollen; width of face equal to the distance between the tips of third and fourth longitudinal veins. Proboscis and palpi black, the latter with prominent pale bristles on anterior surfaces. Antennae black; third joint rounded at tip, about as long as wide. Arista sub-apical. Post-orbital cilia white, except for the upper six bristles, which are black.

Thorax and scutellum dull green with supreous reflections, densely covered with gray pollen; bristles on dorsum of thorax and the four prominent scutellar bristles, black; three prominent white bristles are inserted in a row above the base of fore coxae. Abdomen green, the ground color almost completely obscured by the dense covering of gray pollen; hairs of abdomen pale. Hypopygium black; posterior appendages black, about as long as the maximum width of posterior femora, their apices pointed, with a black, thorn-like, oblique spine near the tip on outer side; inner appendages yellow, nearly twice the length of the posterior appendages.

Fore coxae yellowish-brown, their anterior surface clothed with pale hairs, the bristles at tip yellow. Middle and hind coxae black, each with a prominent white bristle on outer surface, their anterior surfaces with pale hairs. Femora, tibiae and tarsi yellow, the last two joints of all tarsi and the tips of the other joints infuscated. Posterior femora with a row of prominent yellow bristles on the upper basal half. Posterior basitarsus narrowed at the base, where it bears a small, tooth like protuberance on inner edge. Length of anterior tarsal joints as 12-11-9-5-4; of middle tarsi as 22-11-9-5-4; of posterior tarsi as 9-22-11-6-5. Halteres and clypters white, the latter pale cilia.

Wings hyaline, without maculations, the veins brownish-yellow; third and fourth veins parallel and rather close together at tips;

distal segment of fifth vein about one-half the length of posterior cross-vein.

FEMALE. Similar to male in coloration. The posterior basitarsus is not narrowed at the base, and it lacks the tooth-like protuberance present in the male.

Described from 36 males and 48 females taken in California. Thirty-four males and all the females were collected at Redwood City, during the period September 2, 1943 to June 12, 1948 by Mr. P. H. Arnaud, Jr. One male was taken by Mr. Arnaud at San Jose, May 20, 1947; another male was collected by Mr. W. W. Wirth, at Sonoma, September 3, 1948. The types will be distributed as follows: Holotype male and allotype female, both from Redwood City, June 12, 1948, and several paratypes in the insect collection of the California Academy of Sciences; paratypes in the U. S. National Museum, University of California and in the collections of Mr. Arnaud and the writer.

DIFFERENTIA: *Medeterus arnaudi* n. sp. closely resembles *M. californicus* Wheeler, to which it traces in the Van Duzee table of North American species of *Medeterus* (Psyche, 35:36-43, 1928). However, in *californicus* the distal segment of the fifth vein is only one-half the length of the posterior cross-vein; also, in *californicus* the large bristles on the outer surface of middle and hind coxae are black, whereas with *arnaudi* n. sp. the corresponding bristles are white.

APHROSYLUS **WIRTHI** Harmston, n. sp.

MALE. Length, 2 mm.; length of wing, 2.4 mm. Face and front velvety black, the former of approximately the same width as middle femur. Palpi black, the anterior surfaces with a scattering of short, stiff hairs. Postorbital cilia black. Antennae black; third joint triangular, slightly longer than wide, pubescent, with several short, stiff bristles near the base on upper and lower edges. Arista apical, slightly longer than the antennae, its basal half conspicuously thickened.

Thorax dull, black, lightly dusted with brownish pollen; pleurae and scutellum concolorous with dorsum, the latter with a pair of prominent marginal bristles and a single pair of small, hair-like bristles situated outside the larger pair. Abdomen black, the first

segment extending leaf-like over the base of the halteres. Hypopygium black, bulbous, extending forward to the posterior margin of the fifth segment; outer lamellae black, broad at base, with a lateral, leaf-like process on each side, narrowed at the middle, the apical half finger-like, curved upward and fringed with short black hairs.

Legs black, with conspicuous black hairs and bristles. Fore coxae with short, stiff black bristles on anterior surfaces. Fourth and fifth segments of all tarsi compressed dorso-ventrally. Calypters and their cilia black; halteres with black knob, the stem brownish.

Wings uniformly smoky gray in color; second, third and fourth longitudinal veins jet black and very conspicuously broadened; last section of fifth vein and the cross-vein of equal length; anal angle evenly rounded.

Described from 11 males and 14 females taken in California by Mr. W. W. Wirth. Nine males and 10 females were taken at Moss Beach, San Mateo County, March 21, 1948; one male and two females taken at Pebble Beach, San Mateo County, January 3, 1948; one male at Carmel Beach, Monterey County, January 4, 1948 and two females at Bodega Bay, Sonoma County, October 19, 1947. Holotype male and allotype female, both from Moss Beach, San Mateo County, March 21, 1948 deposited in the California Academy of Sciences; paratypes in the collection of Mr. Wirth and the writer.

DIFFERENTIA. *Aphrosylus wirthi* n. sp. is readily distinguishable from the known members of the genus by having greatly broadened second, third and fourth longitudinal wing veins. The uniformly dark wings and black knobs of the halteres offer other identifying marks.

NEURIGONA TORRIDA Harmston, n. sp.

MALE. Length, 2.8 mm.; length of wing, 2.6 mm. Face silvery pollinose, the lower portion narrowed with its sides parallel. Front silvery pollinose. Palpi yellow. Antennae yellow; third joint brown on apical half; arista black, dorsal. Postorbital cilia pale.

Dorsum of thorax and the pleurae greenish-black, with dense covering of gray pollen. Venter and first two segments of abdomen yellow, the remainder of abdomen metallic, green with cupreous reflections. Hypopygium yellow, rounded at apex, without conspicuous external appendages.

Coxae and legs yellow; middle coxae lightly infuscated on outer surface. Hairs and bristles on anterior surface of all coxae, yellow; bristle on outer surface of posterior coxae brown. Fore tibiae considerable thickened, equal in diameter to the fore femora. First and second joints of fore tarsi of equal length, each approximately one-half the length of fore tibia; third joint yellow, somewhat broadened, one-half the length of fourth joint; fourth joint noticeably flattened, its apical half black, slightly more than twice the length of third joint; fifth joint black, flattened, about one-third the length of fourth joint, the inner claw normal, the outer claw greatly flattened and truncate at tip. Length of anterior tarsal joints as 16-16-3-7-3; of the middle tarsi as 32-14-7-5-5; of posterior tarsi as 20-18-8-6-5. Halteres and calypters yellow, the latter with pale cilia.

Wings grayish hyaline; fourth vein arcuate from a point slightly beyond the cross-vein, from which point it is bowed toward the third vein, so that the tips of third and fourth venin are well in front of the apex of wing; distal segment of fifth vein slightly longer than the cross-vein, their comparative lengths as 7:5.

Described from one male taken at Indio, California, April 1, 1948 by Mr. R. Coleman. This specimen was forwarded to me for identification by Mr. W. W. Wirth. The holotype male will be deposited in the California Academy of Sciences.

DIFFERENTIA. The peculiar structure of the fore tarsi will readily distinguish *Neurigona torrida* n. sp. from other members of the genus.

SYNTORMON CALIFORNICUM Harmston, n. sp.

MALE. Length, 2.7 mm. Face approximately the same width as anterior femur; lower two-thirds densely silvery pollinose, upper third lightly pollinose, the blackish ground color perceptible. Front blue, metallic. Antennae black; second joint overlapping third joint on inner surface for about one-third its length; third joint approximately the length of posterior basitarsus, roughly three times as long as wide. Arista apical, as long as third joint. Lateral and inferior postorbital cilia pale, the upper cilia black.

Thorax dark green, metallic, with scarcely a trace of white pollen. Abdomen concolorous with thorax, yet the dorsum with bronze reflections. Hypopygium mostly embedded; outer appendages small, elongate-oval, approximately the same length as last segment of middle tarsi, clothed with minute pale cilia. Stems of

halters brown, the knobs white; calypters white with narrow brown margin, their cilia white.

Coxae, femora, posterior four tibiae and all tarsi black; anterior tibiae and the extreme base of the middle tibiae brownish-yellow. Fore coxae with white hairs and bristles on anterior surface. Middle femora with a row of about six evenly-spaced bristles on the lower edge. Posterior tibiae gradually but conspicuously thickened on apical half. Posterior basitarsus noticeably bent, without a sinuate bristle on lower surface. It is possible that this species possesses a sinuate bristle on the lower surface of posterior basitarsus, which may have been broken off the single specimen at hand. Joints of fore tarsi as 15-6-5-5-4; of middle tarsi as 15-6-5-4-4; of posterior tarsi as 8-8 (other joints missing).

Wings grayish hyaline; the apical one-fourth conspicuously infuscated, appearing smoky; fourth vein in apex of wing; posterior cross-vein located at middle of wing; wing narrowed toward the base, the anal angle not at all prominent.

Described from one male taken two miles east of Canby, Modoc County, California, July 12, 1947 by R. L. Usinger. Holotype male to be deposited in the University of California insect collection.

DIFFERENTIA. *Syntormon californicum* n. sp. is readily identified by the coloration of its wings, it being the only known member of the genus possessing wings with prominent infuscation on apical one-fourth.

ARGYRA UTAHNA Harmston, n. sp.

MALE. Length, 3.6 mm.; length of wing, 3.5 mm. Face silvery pollinose, moderately wide, equaling the width of third antennal joint. Front lightly dusted with silvery pollen, yet the greenish ground color rather evident on upper portion. Papi black, heavily dusted with silvery pollen. Lower cilia and the whiskers white. Antennae black; first joint with coarse black hairs on upper surface; third joint long, obtusely pointed, its length equaling the length of the posterior cross-vein. Arista apical, very prominent and equaling the length of third antennal joint.

Dorsum of thorax green, metallic, with coppery reflections. Pleurae green with violet reflections, dusted with silvery pollen. Scutellum metallic green, with four prominent marginal bristles and many hairs on the dorsum. Abdomen dark green, metallic, with

bronze reflections; the second and third segment each with a large, dull yellowish area on lateral portions. Hairs and bristles of the abdomen black. Hypopygium and the small finger-like, outer lamellae black.

Coxae black, the apices of fore pair slightly yellowish; anterior surfaces of coxae with black hairs and bristles. Femora yellow, the posterior pair blackened on apical fourth. Fore femora with long slender black hairs on outer surface, their length equaling the width of femora. Tibiae yellow, the posterior pair blackened and slightly thickened on apical third. Fore tarsi yellow, the fourth and fifth segments black; middle tarsi black from tip of second segment; posterior tarsi black. Length of fore tarsal segment as 20-6-5-4-4; of middle tarsi as 24-9-7-4-4; of posterior tarsi as 15-12-8-5-3. Halteres yellow; calypters yellow with black tip, their cilia pale.

Wings grayish hyaline, the veins brown; last section of fourth vein bent forward at its middle; last section of fifth vein one and one-half times the length of cross-vein.

Described from one male taken by the author at Monticello, Utah, July 7, 1946. Type to be deposited in the California Academy of Sciences.

DIFFERENTIA. *Argyra utahna* n. sp. closely resembles *A. nigricoxa* Van Duzee in general appearance and coloration. While the two species differ in the structure of the external hypopygial lamellae they are most easily separated by the chaetotaxy of middle femora. *Nigricoxa* possesses a row of five long, evenly-spaced, black bristles on lower edge of middle femora. These bristles are longer than the width of femora; in the case of *utahna* n. sp. the lower edges of middle femora are devoid of conspicuous bristles.